

Applicant : Tal Isaac Lavian and Robert Jaeger
Serial No. : 09/753,017
Filed : December 29, 2000
Page : 6 of 15

Attorney's Docket No.: 10360-056001 / BA0366CIP

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of managing a network device, comprising:
providing a command-line interface application programming interface (CLI-API)
compatible with a command-line interface (CLI) of the network device, the command-line
interface of the network device capable of receiving one or more command-line interface
commands for controlling the network device;
receiving ~~an instruction~~ one or more instructions from an application configured to call
one or more routines in the CLI command-line interface application programming interface; and
the command-line interface application programming interface generating at least one
command-line interface command in response to receiving the one or more instructions from the
application, the command-line interface command being compatible with the command-line
interface of the network device and capable of controlling the network device wherein ~~the at least
one command is compatible with the CLI of the network device.~~
2. (Original) The method of claim 1, wherein the CLI-API is implemented as one or
more object-oriented classes and the one or more routines are method calls in the one or more
object-oriented classes.
3. (Currently Amended) The method of claim 2, wherein ~~the class~~ one or more
object-oriented classes and ~~methods~~ the method calls are compatible with the Java
object-oriented programming language.
4. (Original) The method of claim 2, wherein the one or more object-oriented

Applicant : Tal Isaac Lavian and Robert Jaeger
Serial No. : 09/753,017
Filed : December 29, 2000
Page : 7 of 15

Attorney's Docket No.: 10360-056001 / BA0366CIP

classes are selected from a set of classes including a session management class, an input-output class, a configuration class, a macro-generation class, and other classes.

5. (Currently Amended) The method of claim 1, wherein the at least one command-line interface command in the CLI of the network device is capable of performing one or more network management operations selected from a set of operations including configuring a network device, gathering information on network interfaces on a network device, bringing a network device up or down on a network, and downloading a new image to a network device.

6. (Currently Amended) A network system having network management capabilities, comprising:

a non-application enabled network device having a command line interface (CLI) capable of controlling one or more network management features of the non-application enabled network device, a non-application enabled network device being a network device that is not able to process an application written in a high-level programming language; and

an application-enabled network device capable of executing applications that use a command-line interface application programming interface (CLI-API) to generate one or more commands compatible with the command line interface CLI of the non-application enabled network device and transmit the one or more commands to the non-application enabled network device over [[the]] a network for execution, an application-enabled network device being a network device that is able to process an application written in a high-level programming language.

7. (Original) The network system of claim 6, wherein the application-enabled network device is capable of processing object-oriented applications compatible with the Java programming language.

8. (Currently Amended) The network system of claim 6, wherein A network system having network management capabilities, comprising:

a non-application enabled network device having a command line interface (CLI) capable

Applicant : Tal Isaac Lavian and Robert Jaeger
Serial No. : 09/753,017
Filed : December 29, 2000
Page : 8 of 15

Attorney's Docket No.: 10360-056001 / BA0366CIP

of controlling one or more network management features of the non-application enabled network device;

an application-enabled network device capable of executing applications that use a command-line interface application programming interface (CLI-API) to generate one or more commands compatible with the CLI of the non-application enabled network device and transmitting the one or more commands to the non-application enabled network device over the network for execution; and

a remote serial command line interface (RS-CLI) device connected between the application-enabled network device and the non-application enabled network device, the RS-CLI device capable of receiving receives an application over the a network from the application-enabled network device, executes executing the application and produces producing commands transmitted for transmission over a serial connection connected to the non-application enabled network device,

wherein the commands are compatible with the CLI on the non-application enabled network device.

9. (Original) The network of claim 8, wherein the RS-CLI device comprises,
a storage device capable of storing an instruction;
a network port capable of processing a network protocol stack and connected to the network;

a serial port capable of processing a serial protocol and connected to the non-application enabled network device; and

a processor capable of processing the instruction stored in the storage area of the RS-CLI device that at least generates a command compatible with a CLI of a network device in response to processing the instruction stored in the storage area.

10. (Original) The RS-CLI device of claim 8, wherein the instruction stored in the storage area is from a software component selected from a set of software components including an operating system, an object-oriented component, a virtual machine, and a network protocol

Applicant : Tal Isaac Lavian and Robert Jaeger
Serial No. : 09/753,017
Filed : December 29, 2000
Page : 9 of 15

Attorney's Docket No.: 10360-056001 / BA0366CIP

stack.

11. (Cancelled)

12. (Currently Amended) ~~The RS-CLI device of claim 11~~ A remote serial command-line interface (RS-CLI) device comprising:

a storage device capable of storing an instruction;

a network port capable of being connected to the network and capable of processing a network protocol stack in addition to receiving the instruction;

a serial port capable of processing a serial protocol and capable of being connected to the non-application enabled network device; and

a processor capable of processing the instruction stored in the storage area of the RS-CLI device that at least generates a command compatible with a CLI of the non-application enabled network device in response to processing the instruction stored in the storage area,

wherein the instruction in the storage area is from a software component stored in the storage area and selected from a set of software components including an operating system, an object-oriented component, a virtual machine, a network protocol stack, and an object-oriented application.

13. (Currently Amended) A method of managing a network device, comprising:
receiving an application having instructions compatible with a command-line interface application programming interface (CLI-API), the command-line interface application programming interface being configured to work with a command-line interface (CLI) of the network device, the command-line interface of the network device capable of receiving one or more command-line interface commands for controlling the network device;

creating one or more command-line interface CLI commands capable of controlling the network device in response to processing one or more of the instructions compatible with the command-line interface application programming interface CLI-API;

transmitting the one or more command-line interface CLI commands created by the command-line interface application programming interface CLI-API over a network to the

Applicant : Tal Isaac Lavian and Robert Jaeger
Serial No. : 09/753,017
Filed : December 29, 2000
Page : 10 of 15

Attorney's Docket No.: 10360-056001 / BA0366CIP

network device; and

processing, on the network device, the one or more command-line interface CLI commands created by the command-line interface application programming interface on the network device.

14. (Currently Amended) The method of claim 13, wherein the step of processing the CLI commands on the network device includes managing ~~manages~~ one or more aspects of the operation of the network device.

15. (Original) The method of claim 13, further comprising,
providing results from the processing of the CLI commands on the network device over the network and to the application.

16. (Original) The method of claim 13, wherein the application is executed on an application-enabled network device and the network device is a non-application enabled network device having a CLI.

17. (Original) The method of claim 13, wherein the application enabled network device is capable of processing Java object-oriented instructions.

18. (Currently Amended) An apparatus for managing a non-application enabled network device, a non-application enabled network device being a network device that is not able to process an application written in a high-level programming language, the apparatus comprising:

an application-enabled network device configured to receive an application having instructions compatible with a command-line interface application programming interface (CLI-API), the command-line interface application programming interface configured to work that works with a command-line interface (CLI) of the non-application enabled network device, an application-enabled network device being a network device that is able to process an application written in a high-level programming language;

a processor associated with the application-enabled network device, the processor

Applicant : Tal Isaac Lavian and Robert Jaeger
Serial No. : 09/753,017
Filed : December 29, 2000
Page : 11 of 15

Attorney's Docket No.: 10360-056001 / BA0366CIP

configured to execute that executes the application and creates thereby cause the command-line interface application programming interface to create one or more command-line interface CLI commands in response to processing one or more of the instructions compatible with the CLI-API wherein the one or more command-line interface commands created by the command-line interface application programming interface are capable of controlling the non-application enabled network device; and

a network interface on the application-enabled network device that transmits the one or more command-line interface CLI commands created by the command-line interface application programming interface CLI-API over a network for processing by the non-application enabled network device.

19. (Original) The apparatus of claim 18, wherein the CLI commands created on the application-enabled network device are capable of controlling one or more aspects of the operation of the non-application enabled network device.

20. (Currently Amended) The apparatus of claim 18 [[17]], wherein the application-enabled network device receives results over the network from the processing of the CLI commands on the non-application enabled network device.

21. (Currently Amended) The apparatus of claim 18 [[17]], wherein the application-enabled network device can process Java object-oriented instructions.

22. (New) The method of claim 2, wherein the CLI-API provides an object-oriented application programming interface for the application to develop programmatic interactions with the network device.

23. (New) The method of claim 22, wherein the programmatic interactions with the network device includes stateful applications operable to measure one or more variables on the network device and make decisions based on the one or more measured variables.